Case No. 600754-3U1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
	)	
BRIAN J. SMYTH et al.	)	
	)	**Examiner: RONNIE M. MANCHO**
Serial No.: 10/611,494	)	
	)	**Group Art Unit: 3664**
Filing Date: June 30, 2003	)	
	)	**Confirmation No.: 6765**
For: METHOD OF CREATING A VIRTUAL TRAFFIC NETWORK	)	

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPEAL BRIEF

Dear Sir:

This Appeal Brief is submitted pursuant 37 C.F.R. § 41.37 and is filed in furtherance of the Notice of Appeal filed August 12, 2009.

I. Real Party in Interest

The real party in interest is NAVTEQ North America, LLC, a wholly-owned, indirect subsidiary of Nokia Corporation, a publicly-traded corporation that has its headquarters in Finland.

II. Related Appeals and Interferences

Applicants are not aware of any related appeals, interferences, or judicial proceedings.

III. Status of Claims

Claims 16-22 and 81-106 are currently pending. Claims 1-15, 23-80, and 107-109 have been canceled. Claims 16-22 and 81-106 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2001/0029425 ("Myr"). Claims 16-22 and 81-106 are appealed.

IV. Status of Amendments

No amendments were filed subsequent to the rejection mailed May 14, 2009.

V. Summary of Claimed Subject Matter

Applicants' claims relate to creating a virtual traffic network representing traffic conditions on a road system. Claims 16, 81, and 88 are independent claims. Claims 17-22, 82-87, and 89-106 are dependent claims.

Claim 16 is directed towards a computer-implemented method of creating a virtual traffic network representing traffic conditions on a road system. The method includes inputting into a

processor, a base layer comprising map data representing a road system. (Page 11, lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and Figure 15, ref. no. 312.) The road system is defined by a plurality of links and nodes. (Page 11, lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and Figure 15, ref. nos. 321-324, 1201-1203.) The method further includes the processor creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node. (Page 11, line 28 to page 12, line 2; page 12, lines 14-29; page 14, lines 3-10; page 23, line 18 to page 24, line 13; page 27, line 25 to page 28, line 24; and Figure 16, ref. no. 314.) The method further includes inputting into the processor, flow data related to traffic flow on the road system and information about traffic events on the road system. (Page 12, line 30 to page 13, line 7; page 13, line 23 to page 14, line 2; page 21, line 18 to page 22, line 28; and Figures 5, 7, and 9, ref. nos. 216, 225.) The processor integrates the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system. (Page 14, lines 3-10; page 14, line 32 to page 15, line 14; page 23, lines 9-22.) The virtual traffic network indicates both the flow data and the traffic event information. (Page 12, line 30 to page 14, line 2; page 14, line 32 to page 15, line 14; page 18, lines 24-31; page 21, line 18 to page 22, line 28; and Figures 5 and 7, ref. nos. 216, 225.)

Claim 81 is directed towards an article of manufacture for creating a virtual traffic network representing traffic conditions on a road system. The article of manufacture includes a computer-readable medium encoded with computer-executable instructions for performing a method. The method includes inputting into a processor, a base layer comprising map data representing a road system. (Page 11, lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and Figure 15, ref. no. 312.) The road system is defined by a plurality of links and nodes. (Page 11,

lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and Figure 15, ref. nos. 321-324, 1201-1203.) The method further includes the processor creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node. (Page 11, line 28 to page 12, line 2; page 12, lines 14-29; page 14, lines 3-10; page 23, line 18 to page 24, line 13; page 27, line 25 to page 28, line 24; and Figure 16, ref. no. 314.) The method further includes inputting into the processor, flow data related to traffic flow on the road system and information about traffic events on the road system. (Page 12, line 30 to page 13, line 7; page 13, line 23 to page 14, line 2; page 21, line 18 to page 22, line 28; and Figures 5, 7, and 9, ref. nos. 216, 225.) The processor integrates the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system. (Page 14, lines 3-10; page 14, line 32 to page 15, line 14; page 23, lines 9-22.) The virtual traffic network indicates both the flow data and the traffic event information. (Page 12, line 30 to page 14, line 2; page 14, line 32 to page 15, line 14; page 18, lines 24-31; page 21, line 18 to page 22, line 28; and Figures 5 and 7, ref. nos. 216, 225.)

Claim 88 is directed towards a computer-implemented apparatus for creating a virtual traffic network representing traffic conditions on a road system. The apparatus includes means for inputting into a processor, a base layer comprising map data representing a road system. (Means: map data 212 described on page 11, lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and in Figure 15, ref. no. 312.) The road system is defined by a plurality of links and nodes. (Page 11, lines 10-27; page 23, lines 18-31; page 27, lines 6-15; and Figure 15, ref. nos. 321-324, 1201-1203.) The apparatus further includes means for creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node. (Means: VGSTN 210 described on page 11, line 28 to page 12, line 2; page

12, lines 14-29; page 14, lines 3-10; page 23, line 18 to page 24, line 13; page 27, line 25 to page 28, line 24; and in Figure 16, ref. no. 314.) The apparatus further includes means for inputting into the processor, flow data related to traffic flow on the road system and information about traffic events on the road system. (Means: digital sensors 215, DOT or similar sources, traffic operator 202, and TIMS 220 described on page 12, line 30 to page 13, line 7; page 13, line 23 to page 14, line 2; page 21, line 18 to page 22, line 28; and in Figures 5, 7, and 9, ref. nos. 216, 225.) The apparatus further includes means for integrating the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system. (Means: VGSTN 210 described on page 14, lines 3-10; page 14, line 32 to page 15, line 14; and page 23, lines 9-22.) The virtual traffic network indicates both the flow data and the traffic event information. (Page 12, line 30 to page 14, line 2; page 14, line 32 to page 15, line 14; page 18, lines 24-31; page 21, line 18 to page 22, line 28; and Figures 5 and 7, ref. nos. 216, 225.)

Claim 106 is directed towards means for graphically displaying the virtual traffic network, including the map data, the flow data and the traffic event information, the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information. (Means: graphical network layer 316 of the VGSTN 210 described on page 20, line 21 to page 21, line 4; page 28, line 31 to page 29, line 13; page 39, line 22 to page 40, line 5; and page 40, lines 9-15.)

VI. Grounds of Rejection to be Reviewed on Appeal

At issue is whether Applicants' claims 16-22 and 81-106 are anticipated under 35 U.S.C. § 102(b) by Myr (U.S. Patent Publication No. 2001/0029425).

VII. Argument

1. The Examiner Erred in Rejecting Claims 16-22, 81-97, 99-101, and 103-105 as Being Anticipated by Myr

The Examiner rejected claims 16-22, 81-97, 99-101, and 103-105 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2001/0029425 ("Myr"). "[F]or anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly." MPEP § 706.02. The Examiner erred in rejecting claims 16, 81, and 88 because the Examiner failed to establish a prima facie case of anticipation by pointing out where all of the claim limitations appear in Myr. Specifically, the Examiner failed to show that Myr teaches "*creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node*" as found in claims 16, 81, and 88.

In claims 16, 81, and 88 Applicants recite a method or system for creating a virtual traffic network representing traffic conditions on a road system. The method includes inputting into a processor, a base layer comprising map data representing a road system. The road system is defined by a plurality of links and nodes. The method further includes the processor *creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node*. The method further includes inputting into the processor, flow data related to traffic flow on the road system and information about traffic events on the road system. The processor then integrates the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system. The virtual traffic network indicates both the flow data and the traffic event information. Applicants describe that:

> The traffic layer 314 of the road system is ... better suited to processing traffic data than the basic link and node model utilized by the base layer 312.

(Applicants' Specification, paragraph 110.)

Myr describes that "[a]n important function of the CTU database is maintaining and updating geographical maps of all major and minor roads divided according to geographic zones." (Myr, paragraph 136.) "[T]he travel time data is combined with geographical data, grouped according to geographic zones." (Myr, paragraph 136.) Myr also describes dividing roads into two categories. (Myr, paragraph 114.) However, neither the division of the map by zones nor the division of the map by road category modifies the link and node structure of the map. Specifically, Myr's map division does not result in combining multiple links and nodes into a single link with an upstream node and a downstream node.

In response to Applicants' arguments that Myr does not show or suggest creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node, the Examiner cited to Myr for teachings regarding inputting updated traffic flow data, accident reports, and traffic situations into Myr's central traffic unit. (Office Action Mailed May 14, 2009, page 6.) However, these teachings relate to step (c) of Applicants' claims 16, 81, and 88 ("*inputting into the processor flow data related to traffic flow on the road system and information about traffic events on the road system*"). As a result, the Examiner has failed to identify where or how Myr teaches "*combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node*" to create a traffic layer.

Because Myr does not show or suggest creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node as claimed in claims 16, 81, and 88, the rejection of these claims should be reversed.

Claims 17-22 and 95-97 depend from claim 16. Claims 82-87 and 99-101 depend from claim 81. Claims 89-94 and 103-105 depend from claim 88. Accordingly, Applicants also submit that the rejection of claims 17-22, 82-87, 89-94, 95-97, 99-101, and 103-105 should be reversed for at least the reasons described above with reference to claims 16, 81, and 88.

2. The Examiner Erred in Rejecting Claims 98, 102, and 106 as Being Anticipated by Myr

The Examiner also rejected claims 98, 102, and 106 under 35 U.S.C. § 102(b) as being anticipated by Myr. As described above, the Examiner has the burden of pointing out where all of the claim elements of claims 98, 102, 106 appear in Myr.

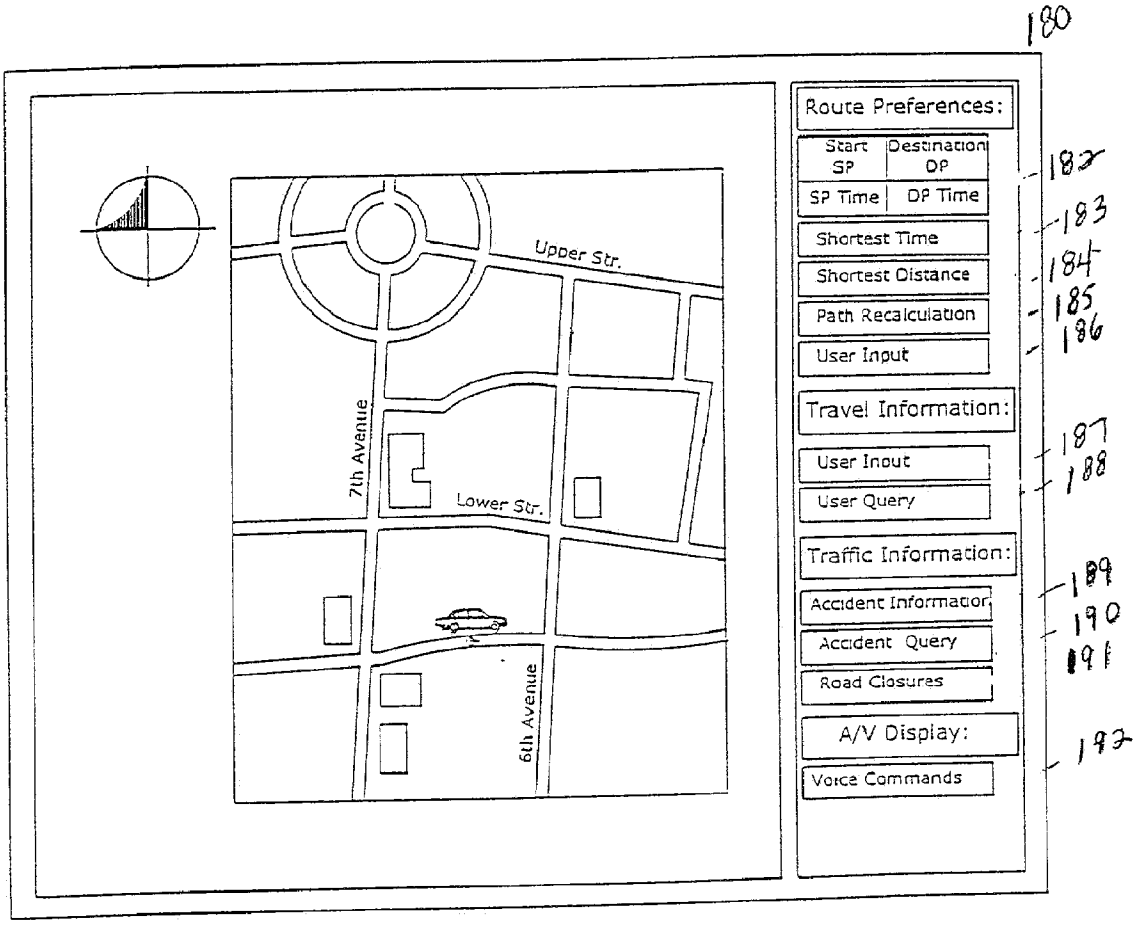
Claim 98 depends from claim 16. Claim 102 depends from claim 81. Claim 106 depends from claim 88. Accordingly, Applicants believe that Myr does not anticipate claims 98, 102, and 106 for at least the reasons described with reference to claims 16, 81, and 88. Applicants also believe that Myr does not anticipate claims 98, 102, and 106 because Myr does not show or suggest "*the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information.*"

The Examiner stated "that Myr disclose [sic] a graphical display in the figures cited." (Office Action Mailed May 14, 2009, page 6.) The cited figures are Myr's Figures 8, 13, 16-18, and 20. (Office Action Mailed May 14, 2009, page 5.) While Myr's Figure 8 depicts a display,

none of Myr's Figures 13, 16-18, and 20 depict a display. (See, e.g, Myr, paragraphs 34, 37-39, 41.)

Myr's Figure 8 is shown below.

Fig. 8 MGU Mobile PC Display Panel



Myr's Figure 8 depicts a vehicle display that shows: (1) the ***vehicle's position*** on a map; (2) ***text displays*** for route preference information (start and destination information), shortest time estimate, shortest distance estimate, path recalculation data, user input data, travel information (user input, user query), traffic information (accident information, accident query, and road closures); and (3) ***audio/video display*** for voice commands and channel selection data.

(Myr, paragraphs 105, 111 and Figure 8, emphasis added.) Notably, Myr's Figure 8 does not show *at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information* as claimed. Instead, Myr describes presenting traffic information in a text format:

> Further text information under the category Traffic Information includes Accident Information 189, Accident Query 190 and Road Closures 191.

(Myr, paragraph 111.)

Because Myr does not show or suggest "*the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information*" as claimed in claims 98, 102, and 106, the rejection of these claims should be reversed.

VIII. Conclusion

Applicants have demonstrated that the rejections are in error as a matter of law. Applicants therefore request reversal of the rejections and allowance of all pending claims in this application.

Respectfully submitted,

Date: October 13, 2009

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CLAIMS APPENDIX

1-15. (Canceled)

16. (Previously Presented) A computer-implemented method of creating a virtual traffic network representing traffic conditions on a road system, the method comprising:

(a) inputting into a processor a base layer comprising map data representing a road system, the road system being defined by a plurality of links and nodes;

(b) the processor creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node;

(c) inputting into the processor flow data related to traffic flow on the road system and information about traffic events on the road system; and

(d) the processor integrating the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system, wherein the virtual traffic network indicates both the flow data and the traffic event information.

17. (Original) The method of claim 16 wherein the flow data is real-time flow data, the virtual traffic network representing real-time traffic conditions on the road system.

18. (Original) The method of claim 16 wherein the flow data is input from a plurality of road sensors.

19. (Original) The method of claim 16 wherein step (a) further comprises customizing the map data to define locally known features of the road system.

20. (Previously Presented) The method of claim 16 wherein one of the traffic events are incidents and the information includes information related to incidents on the road system.

21. (Previously Presented) The method of claim 16 wherein the map data, the flow data and the information have a synaptic relationship with each other.

22. (Original) The method of claim 16 wherein the virtual traffic network is spatially oriented.

23-80. (Canceled)

81. (Previously Presented) An article of manufacture for creating a virtual traffic network representing traffic conditions on a road system, the article of manufacture comprising a computer-readable medium encoded with computer-executable instructions for performing a method comprising:

(a) inputting into a processor a base layer comprising map data representing a road system, the road system being defined by a plurality of links and nodes;

(b) the processor creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node;

(c) inputting into the processor flow data related to traffic flow on the road system and information about traffic events on the road system; and

(d) the processor integrating the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system, wherein the virtual traffic network indicates both the flow data and the traffic event information.

82. (Previously Presented) The article of manufacture of claim 81 wherein the flow data is real-time flow data, the virtual traffic network representing real-time traffic conditions on the road system.

83. (Previously Presented) The article of manufacture of claim 81 wherein the flow data is input from a plurality of road sensors.

84. (Previously Presented) The article of manufacture of claim 81 wherein step (a) further comprises customizing the map data to define locally known features of the road system.

85. (Previously Presented) The article of manufacture of claim 81 wherein one of the traffic events are incidents and the information includes information related to incidents on the road system.

86. (Previously Presented) The article of manufacture of claim 81 wherein the map data, the flow data and the information have a synaptic relationship with each other.

87. (Previously Presented) The article of manufacture of claim 81 wherein the virtual traffic network is spatially oriented.

88. (Previously Presented) A computer-implemented apparatus for creating a virtual traffic network representing traffic conditions on a road system, the apparatus comprising:

(a) means for inputting into a processor a base layer comprising map data representing a road system, the road system being defined by a plurality of links and nodes;

(b) means for creating a traffic layer by combining multiple links and nodes of the base layer into a single link with an upstream node and a downstream node;

(c) means for inputting into the processor flow data related to traffic flow on the road system and information about traffic events on the road system; and

(d) means for integrating the base layer, the traffic layer, the flow data and the traffic event information to produce a virtual traffic network representing traffic conditions on the road system, wherein the virtual traffic network indicates both the flow data and the traffic event information.

89. (Previously Presented) The apparatus of claim 88 wherein the flow data is real-time flow data, the virtual traffic network representing real-time traffic conditions on the road system.

90. (Previously Presented) The apparatus of claim 88 wherein the flow data is input from a plurality of road sensors.

91. (Previously Presented) The apparatus of claim 88 wherein the means for inputting into a processor a base layer comprising map data representing a road system further comprises means for customizing the map data to define locally known features of the road system.

92. (Previously Presented) The apparatus of claim 88 wherein one of the traffic events are incidents and the information includes information related to incidents on the road system.

93. (Previously Presented) The apparatus of claim 88 wherein the map data, the flow data and the information have a synaptic relationship with each other.

94. (Previously Presented) The apparatus of claim 88 wherein the virtual traffic network is spatially oriented.

95. (Previously Presented) The method of claim 16 wherein each link represents a distinct stretch of the road system between two nodes, each node being a decision point on the road system.

96. (Previously Presented) The method of claim 16 wherein each link represents a distinct stretch of the road system between two nodes, each node being where two or more roadways merge together.

97. (Previously Presented) The method of claim 16 wherein inputting information about traffic events on the road system is performed by a human operator.

98. (Previously Presented) The method of claim 16 further comprising:

(e) graphically displaying the virtual traffic network, including the map data, the flow data and the traffic event information, the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information.

99. (Previously Presented) The article of manufacture of claim 81 wherein each link represents a distinct stretch of the road system between two nodes, each node being a decision point on the road system.

100. (Previously Presented) The article of manufacture of claim 81 wherein each link represents a distinct stretch of the road system between two nodes, each node being where two or more roadways merge together.

101. (Previously Presented) The article of manufacture of claim 81 wherein inputting information about traffic events on the road system is performed by a human operator inputting the traffic event information into a user interface display screen.

102. (Previously Presented) The article of manufacture of claim 81 wherein the computer-readable medium is encoded with computer-executable instructions for performing a method further comprising:

(e) graphically displaying the virtual traffic network, including the map data, the flow data and the traffic event information, the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information.

103. (Previously Presented) The apparatus of claim 88 wherein each link represents a distinct stretch of the road system between two nodes, each node being a decision point on the road system.

104. (Previously Presented) The apparatus of claim 88 wherein each link represents a distinct stretch of the road system between two nodes, each node being where two or more roadways merge together.

105. (Previously Presented) The apparatus of claim 88 wherein the means for inputting information about traffic events is a user interface display screen that receives the traffic event information from a human operator.

106. (Previously Presented) The apparatus of claim 88 further comprising:

(e) means for graphically displaying the virtual traffic network, including the map data, the flow data and the traffic event information, the graphical display showing at least one of an animated flow display using the flow data and an icon corresponding to the traffic event using the traffic event information.

107-109. (Canceled)

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.